Quoc-Viet Pham

Personal Data

Place and Date of Birth:	Hai Duong, Vietnam | 05 April 1990
Address:	310-2, ABC Center, Pusan National University, Yangsan Campus, 50612 Korea
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Education

Aug. 2017 — Doctor of Engineering in Telecommunications, **Inje University**, Kimhae, Korea
Thesis: "Fair and Energy-Efficient Resource Allocation Optimization in Wireless Networks"
Advisor: Prof. Won-Joo Hwang
GPA: 4.39/4.50
Prize: Best Ph.D. Dissertation, Ranking #1 in Engineering

Aug. 2015 — Master of Science in Telecommunications, **Inje University**, Kimhae, Korea
Thesis: "Multi-Timescale Cross-Layer Design in Wireless Multihop Networks"
Advisor: Prof. Won-Joo Hwang
GPA: 4.50/4.50

Aug. 2013 — Bachelor of Science in Electronics and Telecommunications,
Hanoi University of Science and Technology, Hanoi, Vietnam
Thesis: "Building an Observational Data Processing and Archiving Center for Automatic Water Level Gathering and Alarming System" (in Vietnamese)
Advisor: Prof. Van-Duc Nguyen
GPA: 3.08/4.00

Work Experience

Jan. 2020 - Current — Research Professor,
Korean Southeast Center for the 4th Industrial Revolution Leader Education,
Pusan National University, Korea

Mar. 2018 - Dec. 2019 — Research Professor,
ICT Convergence Center, Changwon National University/Inje University, Korea

Sep. 2017 - Feb. 2018 — Post-Doctoral Research Fellow,
Dept. Computer Science and Engineering, Kyung Hee University, Korea

Sep. 2013 - Jun. 2017 — Research Assistant, Wireless Networks (WINE) laboratory,
Dept. Information and Communication System, Inje University, Korea

Visiting Experience

Jan. 2016- Feb. 2016 — Tokyo University of Science, Japan, Prof. Mikio Hasegawa

Aug. 2019 - Aug. 2019 — Tokyo University of Science, Japan, Prof. Mikio Hasegawa

Grants and Projects

2019 - 2024 **NRF Basic Science and Research** (500,000,000 KRW), Principal Investigator
Grant NRF-2019R1C1C1006143
Title: *Privacy Enhancing Connected Cars in 5G and Beyond*

2022 - 2024 **FDCRGP Grant** ($136,000, 3 years)
Co-Principal Investigator
Title: *Edge-assisted Activity Recognition using Skeletal Representation and DL for Video Surveillance*

2019 - 2022 **NRF Basic Science and Research** (100,000,000 KRW/year, up to 5 years)
Key Participant, Grant NRF-2019R1I1A3A01060518
Title: *Edge Computing in the 5G Ecosystem: Joint 4C Framework and Its Applications*

2018 - 2019 **NRF Basic Science and Research** (25,000,000 KRW), Key Participant
Project in collaboration with the Australian side (Grant NRF-2018K2A9A1A01090540)
Title: *Low Overhead Channel Access for 5G Mobile Communications in Large-Scale IoT Networks*

2020 - 2027 **Brain Korea (BK) 21** (549,825,000 KRW/year), Participant
Korean Southeast Center for the 4th Industrial Revolution Leader Education,
Pusan National University

Awards and Recognition

- BKACAD certificate of CCNA course, 2012.
- University scholarship for excellent students, HUST, 2010-2013.
- Prize for excellent students, Vietnamese Students' Association in Korea (VSAK), 2015.
- Best paper award, KMMS 2014, JKCCS 2016, KJCCS 2020, KICS 2021.
- Leadership and scientific publication scholarship, Inje University, 2015-2016.
- Best Ph.D. dissertation, Inje University, Spring 2017.
- Top reviewer award, IEEE Transactions on Vehicular Technology, 2020.
- Top 2% of scientists on Stanford University list, 2021.
- Award for outstanding contributions and research excellence, Minister of Education (Korea), 2021.
- Golden globe award 2021 for Vietnamese young scientists, Ministry of Science and Technology, 2021.

Mentoring and Teaching Experience

Teaching Courses, Inje University

1. Network Optimization
2. Game Theory
3. Machine Learning in Wireless and Communication Networks

Teaching assistant, Inje University

1. Introduction to Android Programming, Fall semester 2016.
2. Data and Computer Communications, 2016-2017 (3 semesters).

Mentoring assistant, Hanoi University of Science and Technology

1. Project II (a course for 4th-year undergraduate student), Fall 2012.

Supervision

Doctoral Students

- Le Thi Mai [PNU, 2021/3-Present] - *Topic*: Wireless AI and aerial access networks.
- Nguyen Minh Duong [PNU, 2020/9-Present] - *Topic*: DRL for 6G resource optimization
- Swe Swe Latt [PNU, 2020/9-Present] - *Topic*: federated learning and 6G resource optimization
- Dao Thien Thanh [PNU, 2020/9-Present] - *Topic*: deep learning and depth map
- Nadia Iradukunda [Inje University, 2019/9-Present] - *Topic*: UAV communications in 5G and beyond

Master Students

- Daeil Noh [PNU, 2020/9-Present] - *Topic*: Deep learning for amateur UAV recognition
- Sang Min Lee [PNU, 2020/9-Present] - *Topic*: Communication-efficient federated learning

Alumnus

- Le Thi Mai [MS, Inje University, 2019/3-2021/2] - *Topic*: swarm intelligence for D2D communications
- Hoang Huu Trung [Ph.D., Inje University, 2018/9-2021/2] - *Topic*: ML for mmWave communications
- Vo Ta Hoang [Ph.D., Inje University, 2017/9-2020/2] - *Topic*: resource allocation for MEC systems
- Nguyen Tien Hoang [MS, Inje University, 2017/9-2019/8] - *Topic*: coalitional games for NOMA-MEC
- Maurice Nduwayezu [MS, Inje University, 2017/9-2019/8] - *Topic*: DRL for NOMA-MEC offloading
- Girmay Gebremariam [MS, Inje University, 2017/9-2019/8] - *Topic*: swarm intelligence for D2D communications with unlicensed spectrum
- Akmal Azizan [MS, Inje University, 2017/9-2019/8] - *Topic*: blockchain for healthcare applications

Professional Activities

Editors

- Journal of Network and Computer Applications [Elsevier, Q1, IF 6.281, 2020-Present]
- IEEE Internet of Things Journal [Lead Guest Editor, Aerial Computing for the Internet-of-Things (IoT), 2021-2022]
- Frontiers in Communications and Networks [Associate Editor, 2020-Present]
- Frontiers in Communications and Networks [Guest Editor, Communication Efficient Edge Learning for Unmanned Aerial Vehicle Networks, 2021]
- Sensors [Guest Editor, Security and Privacy in the Internet of Things (IoT), 2021-2022]

Invited Referee for Journals

- **Letters**: IEEE COMML, IEEE WCL, IEEE L-NET.
- **Transactions**: IEEE TCOM, IEEE TWC, IEEE TVT, IEEE TMC, IEEE TSC, IEEE TPDS, IEEE TCSS, IEEE JSAC, IEEE TGCN, IEEE TSIPN, IEEE IoTJ.
- **Magazines**: IEEE CommMag, IEEE WCM, IEEE CSM, IEEE VTM, IEEE CIM.
- **Other Journals**: ACM CSUR, IEEE SJ, IEEE Access, ComNet, ETT, EURASIP JWCN, IJDSN, Sensors.

Technical Program Committee

- **2022**: IEEE ICC, IEEE VTC.
- **2021**: IEEE VTC2021-Fall, IEEE ISC2, EAI Qshine, FICTA, IEEE GLOBECOM.
- **2020**: ICCIS, IEEE WCNC, IEEE ICC, IEEE VTC2020-Spring, IEEE STP-CPS-SECON.

TPC Chair/Track Chair

- **2022**: EAI GameNets 2022 (11th EAI International Conference on Game Theory for Networks), ICIT 2022 (The First International Conference on Intelligence of Things), SoICT 2022 (11th International Symposium on Information and Communication Technology)

Administrator

- telecom-vn: 127.0.0.1 of Vietnamese Telecomian Community

Fields of Research Interest

- **Edge Computing**: resource optimization, edge of things, and edge AI.
- **Future Networks**: 6G, Internet of Things, intelligent surfaces, and blockchain.
- **Wireless AI**: communication-efficient federated learning, sustainable AI, and secure learning.
- **AI for Future Networks**: deep learning, deep reinforcement learning, and federated learning.

Publications

Books

[1] C. de Alwis, **Q.-V. Pham**, P. Kumar, and M. Liyanage, *6G Frontiers: New Technologies, Applications, and Standardization Approaches*, Wiley-IEEE Press, expected Mar. 2022 (book proposal approved).

Book Chapters

[1] N.-N. Dao, N.-T. Dinh, **Q.-V. Pham**, T. V. Phan, S. Cho, and T. Braun, "Vulnerabilities in fog/edge computing from architectural perspectives," in *Fog/Edge Computing For Security, Privacy, and Applications*, Springer, 2021 [Eds].

[2] **Q.-V. Pham**, T. Huynh-The, M. Zeng, Z. Yang, Z. Ding, and W.-J. Hwang, "The Emergence of Aerial Computing: Architecture, Applications, and Challenges," in *6G Wireless: The Communication Paradigm Beyond 2030*, CRC Press, 2022 [Eds].

[3] M. Zeng, E. Bedeer, X. Li, **Q.-V. Pham**, O. A. Dobre, P. Fortier, and L. A. Rusch, "Resource Allocation for IRS-Empowered Wireless Communications," in *6G Wireless: The Communication Paradigm Beyond 2030*, CRC Press, 2022 [Eds].

[4] Z. Yang, **Q.-V. Pham**, *et al.*, "Federated Learning for Unmanned Aerial Vehicle Communication Networks," in *Secure and Digitalized Future Mobility: Shaping the Ground and Air Vehicles Cooperation*, CRC Press, 2022 [Eds].

[5] **Q.-V. Pham**, D. C. Nguyen, T. Huynh-The, W.-J. Hwang, and P. N. Pathirana, "Artificial intelligence and big data for COVID-19 and social distancing," in *Enabling Technologies for Social Distancing: Fundamentals, concepts and solutions*, IET, 2022 [Eds].

[6] D. C. Nguyen, **Q.-V. Pham**, M. Ding, P. N. Pathirana, and A. Seneviratne, "Security and privacy and blockchain applications in COVID-19 detection and social distancing," in *Enabling Technologies for Social Distancing: Fundamentals, concepts and solutions*, IET, 2022 [Eds].

Preprints and Under Review

[1] P. K. R. Maddikunta, **Q.-V. Pham**, D. C. Nguyen, T. Huynh-The, O. Aouedi, G. Yenduri, and T. R. Gadekallu, "Incentive Techniques for the Internet of Things: A Survey," under review, *IEEE Communications Surveys and Tutorials*.

[2] T.-H. Vu, T.-V. Nguyen, **Q.-V. Pham**, D. B. da Costa, and S. Kim, "UAV-Aided Short-Packet NOMA Networks with Imperfect CSI and SIC," under review, *IEEE Internet of Things Journal*.

[3] Y. M. Saputra, D. N. Nguyen, H. T. Dinh, **Q.-V. Pham**, E. Dutkiewicz, and W.-J. Hwang, "Federated Learning Framework with Straggling Mitigation and Privacy-Awareness for AI-based Mobile Application Services," under review, *IEEE Transactions on Mobile Computing*.

[4] **Q.-V. Pham**, R. Ruby, F. Fang, D. C. Nguyen, Z. Yang, M. Le, Z. Ding, and W.-J. Hwang, "Aerial Computing: A New Computing Paradigm, Applications, and Challenges," under revision, *IEEE Internet of Things Journal*.

[5] H. Dang-Ngoc, D. N. Nguyen, K. Ho-Van, H. T. Dinh, E. Dutkiewicz, **Q.-V. Pham**, and W.-J. Hwang, "Secure Swarm UAV-assisted Communications with Cooperative Friendly Jamming," under review, *IEEE Transactions on Communications*.

[6] T. Huynh-The, T.-V. Nguyen, **Q.-V. Pham**, D. B. da Costa, and D.-S. Kim, "MIMO-OFDM Modulation Classification Using Three-Dimensional Convolutional Network," under revision, *IEEE Transactions on Vehicular Technology*.

[7] M.-D. Nguyen, S.-M. Lee, **Q.-V. Pham**, H. T. Dinh, D. N. Nguyen, and W.-J. Hwang, "HCFL: A High Compression Approach for Communication-Efficient Federated Learning in Very Large-Scale IoT Networks," under revision, *IEEE Transactions on Mobile Computing*.

[8] **Q.-V. Pham**, M. Le, T. Huynh-The, Z. Han, and W.-J. Hwang, "Energy-Efficient Federated Learning over UAV-enabled Wireless Powered Communications," under revision, *IEEE Transactions on Vehicular Technology*.

[9] J. Jiang, F. Liu, W. W. Y. Ng, Q. Tang, W. Wang, and **Q.-V. Pham**, "Dynamic Incremental Ensemble Fuzzy Classifier for Data Streams in Green Internet of Things," under revision, *IEEE Transactions on Green Communications and Networking*.

[10] T. Huynh-The, T.-V. Nguyen, **Q.-V. Pham**, V.-S. Doan, D. B. da Costa, and D.-S. Kim, "Efficient Convolutional Networks for Robust Automatic Modulation Classification in OFDM-Based Wireless Systems," under revision, *IEEE Systems Journals*.

[11] T. Huynh-The, **Q.-V. Pham**, T.-V. Nguyen, D. B. da Costa, and D.-S. Kim, "High-Performance Convolutional Network for RF-Based Drone Surveillance," under review, *IEEE Systems Journals*.

[12] T. R. Gadekallu, **Q.-V. Pham**, T. Huynh-The, S. Bhattacharya, P. K. R. Maddikunta, and M. Liyanage, "Federated Learning for Big Data: A Survey on Opportunities, Applications, and Future Directions," under revision, *ACM Computing Surveys*.

[13] C. T. Nguyen, N. V. Huynh, N. H. Chu, Y. M. Saputra, H. T. Dinh, D. N. Nguyen, **Q.-V. Pham**, D. Niyato, E. Dutkiewicz, and W.-J. Hwang, "Transfer Learning for Wireless Networks: A Comprehensive Survey" under review, *Proceedings of the IEEE*.

[14] M. Parimala, R. M. Swarna Priya, **Q.-V. Pham**, K. Dev, P. K. R. Maddikunta, T. R. Gadekallu, and T. Huynh-The, "Fusion of Federated Learning and Industrial Internet of Things: A Survey," under review, *Future Generation Computer Systems*.

[15] B. Prabadevi, **Q.-V. Pham**, M. Liyanage, N. Deepa, Mounik VVSS, S. Reddy, P. K. R. Maddikunta, N. Khare, T. R. Gadekallu, and W.-J. Hwang, "Deep Learning for Intelligent Demand Response and Smart Grids: A Comprehensive Survey," under review, *Computer Science Review*.

[16] S. A. Khowaja, K. Dev, P. Khuwaja, **Q.-V. Pham**, N. M. F. Qureshi, P. Bellavista, and M. Magarini, "IIFNet: An Efficient Preamble Detection Approach for 6G and Beyond Networks," under revision, *IEEE Network*.

[17] T. R. Gadekallu, **Q.-V. Pham**, T. Huynh-The, S. Bhattacharya, P. K. R. Maddikunta, and M. Liyanage, "Federated Learning for Big Data: A Survey on Opportunities, Applications, and Future Directions," under review, *ACM Computing Surveys*.

[18] M. Alazab, R. Vinayakumar, S. Srinivasan, **Q.-V. Pham**, S. Venkatraman, Soman KP, and K. Simran, "Deep Learning for Cyber Security Applications: A Comprehensive Survey," under revision, *IEEE Communications Surveys and Tutorials*.

Journal Articles

[1] **Q.-V. Pham**, M. Zeng, T. Huynh-The, Z. Han, and W.-J. Hwang, "Aerial Access Networks for Federated Learning: Applications and Challenges," *IEEE Network*, in press.

[2] M. Le, **Q.-V. Pham**, H.-C. Kim, and W.-J. Hwang, "Enhanced Resource Allocation in D2D Communications with NOMA and Unlicensed Spectrum," *IEEE Systems Journal*, in press.

[3] B. M. ElHalawany, E. M. Mohamed, **Q.-V. Pham**, K. Wu, and AAA El-Banna, "Spectrum Sharing in Cognitive-Radio Inspired NOMA Systems under Imperfect SIC and Co-Channel Interference," *IEEE Systems Journal*, in press.

[4] W. Wang, F. H. Memon, Z. Lian, H. Xu, T. R. Gadekallu, **Q.-V. Pham**, K. Dev, and C. Su, "Secure-Enhanced Federated Learning for AI-Empowered Electric Vehicle Energy Prediction," *IEEE Consumer Electronics Magazine*, in press.

[5] R. Ruby, **Q.-V. Pham**, K. Wu, A. A. Heidari, H. Chen, and B. M. ElHalawany, "Enhancing Secrecy Performance of Cooperative NOMA-based IoT Networks via Multi-Antenna Aided Artificial Noise," *IEEE Internet of Things Journal*, in press.

[6] H. Yang, R. Ruby, **Q.-V. Pham**, and K. Wu, "Aiding a Disaster Spot via Multi-UAV-based IoT Networks: Energy and Mission Completion Time-Aware Trajectory Optimization," *IEEE Internet of Things Journal*, in press.

[7] P. K. R. Maddikunta, **Q.-V. Pham**, B. Prabadevi, N. Deepa, K. Dev, T. R. Gadekallu, R. Ruby, and M. Liyanage, "Industry 5.0: A Survey on Enabling Technologies and Potential Applications," *Journal of Industrial Information Integration*, in press.

[8] T.-T. Dao, **Q.-V. Pham**, and W.-J. Hwang, "FastMDE: A Fast CNN Architecture for Monocular Depth Estimation at High Resolution," *IEEE Access*, in press.

[9] N. Deepa, **Q.-V. Pham**, D. C. Nguyen, S. Bhattacharya, B. Prabadevi, T. R. Gadekallu, P. K. R. Maddikunta, F. Fang, and P. N. Pathirana, "A Survey on Blockchain for Big Data: Approaches, Opportunities, and Future Directions," *Future Generation Computer Systems*, in press.

[10] D. C. Nguyen, **Q.-V. Pham**, P. N. Pathirana, M. Ding, A. Seneviratne, J. Lin, O. A. Dobre, and W.-J. Hwang, "Federated Learning for Smart Healthcare: A Survey," *ACM Computing Surveys*, vol. 55, no. 3, pp. 1-37, Apr. 2023.

[11] M. Alazab, R. M. Swarna Priya, M. Parimala, P. K. R. Maddikunta, T. R. Gadekallu, and **Q.-V. Pham**, "Federated Learning for Cybersecurity: Concepts, Challenges and Future Directions," *IEEE Transactions on Industrial Informatics*, vol. 18, no. 5, pp. 3501-3509, May 2022.

[12] R. M. Swarna Priya, M. Parimala, **Q.-V. Pham**, P. K. R. Maddikunta, T. Huynh-The, T. T. Nguyen, M. Alazab, and T. R. Gadekallu, "Federated learning enabled digital twins for smart cities: Concepts, recent advances, and future directions," *Sustainable Cities and Society*, vol. 79, pp. 103663, Apr. 2022.

[13] H. Ta, **Q-V. Pham**, K. Ho-Van, and S. W. Kim, "Covert communication with noise and channel uncertainties," *Wireless Networks*, vol. 28, no. 1, pp. 161-172, Jan. 2022.

[14] T. R. Gadekallu, **Q.-V. Pham**, D. C. Nguyen, P. K. R. Maddikunta, N. Deepa, B. Prabadevi, P. N. Pathirana, J. Zhao, and W.-J. Hwang, "Blockchain for Edge of Things: Applications, Opportunities, and Challenges," *IEEE Internet of Things Journal*, vol. 9, no. 2, pp. 964-988, Jan. 2022.

[15] Q. V. Do, **Q.-V. Pham**, and W.-J. Hwang, "Deep Reinforcement Learning for Energy-Efficient Federated Learning in UAV-Enabled Wireless Powered Networks," *IEEE Communications Letters*, vol. 26, no. 1, pp. 99-103, Jan. 2022.

[16] S. Ramasubbareddy, S. Ramasamy, K. S. Sahoo, R. L. Kumar, **Q.-V. Pham**, and N.-N. Dao, "CAVMS: Application-Aware Cloudlet Adaption and VM Selection Framework for Multi-Cloudlet Environment," *IEEE Systems Journal*, vol. 15, no. 4, pp. 5098-5106, Dec. 2021.

[17] L. Nkenyereye, L. Nkenyereye, **Q.-V. Pham**, and J. S. Song, "Efficient RSU Selection Scheme for Fog-based Software-Defined Vehicular Network," *IEEE Transactions on Vehicular Technology*, vol. 70, no. 11, pp. 12126-12141, Nov. 2021.

[18] H. Han, J. Zhao, W. Zhai, Z. Xiong, D. Niyato, M. D. Renzo, **Q.-V. Pham**, W. Lu, and K.-Y. Lam, "Reconfigurable Intelligent Surface Aided Power Control for Physical-Layer Broadcasting," *IEEE Transactions on Communications*, vol. 69, no. 11, pp. 7821-7836, Nov. 2021.

[19] S. Agrawal, S. Sarkar, M. Alazab, P. K. R. Maddikunta, T. R. Gadekallu, **Q.-V. Pham**, "Genetic CFL: Hyperparameter Optimization in Clustered Federated Learning," *Computational Intelligence and Neuroscience*, vol. 2021, Nov. 2021.

[20] T. Huynh-The, **Q.-V. Pham**, T.-V. Nguyen, T. T. Nguyen, R. Ruby, M. Zeng, and D.-S. Kim, "Automatic Modulation Classification: A Deep Architecture Survey," *IEEE Access*, vol. 9, pp. 142950-142971, Oct. 2021.

[21] **Q.-V. Pham**, D. C. Nguyen, S. Mirjalili, H. T. Dinh, D. N. Nguyen, P. N. Pathirana, and W.-J. Hwang, "Swarm Intelligence for Next-Generation Networks: Recent Advances and Applications," *Journal of Network and Computer Applications*, vol. 191, pp. 103141, Oct. 2021.

[22] T. Huynh-The, C.-H. Hua, V.-S. Doan, **Q.-V. Pham**, and D.-S. Kim, "Accurate Deep CNN-based Waveform Recognition for Intelligent Radar Systems," *IEEE Communications Letters*, vol. 25, no. 9, pp. 2938-2942, Sep. 2021.

[23] D. C. Nguyen, M. Ding, **Q.-V. Pham**, P. N. Pathirana, L. B. Le, A. Seneviratne, J. Li, D. Niyato, and H. V. Poor, "Federated Learning Meets Blockchain in Edge Computing: Opportunities and Challenges," *IEEE Internet of Things Journal*, vol. 8, no. 16, pp. 12806-12825, Aug. 2021.

[24] P. K. R. Maddikunta, S. Hakak, M. Alazab, S. Bhattacharya, T. R. Gadekallu, W. Z. Khan, and **Q.-V. Pham**, "Unmanned Aerial Vehicles in Smart Agriculture: Applications, Requirements and Challenges," *IEEE Sensors Journal*, vol. 21, no. 6, pp. 17608-17619, Aug. 2021.

[25] T. Huynh-The, V.-S. Doan, C.-H. Hua, **Q.-V. Pham**, T.-V. Nguyen, and D.-S. Kim, "Accurate LPI Radar Waveform Recognition with CWD-TFA for Deep Convolutional Network," *IEEE Wireless Communications Letters*, vol. 10, no. 8, pp. 1638-1642, Aug. 2021.

[26] R. L. Kumar, **Q.-V. Pham**, F. Khan, M. J. Piran, K. Dev, "Blockchain for Securing Aerial Communications: Potentials, Solutions, and Research Directions," *Physical Communication*, vol. 47, pp. 101390, Aug. 2021

[27] L. Nkenyereye, J. Y. Hwang, **Q.-V. Pham**, and J. S. Song, "Virtual IoT Service Slice Functions for Multi-Access Edge Computing Platform," *IEEE Internet of Things Journal*, vol. 8, no. 14, pp. 11233-11248, Jul. 2021.

[28] **Q.-V. Pham**, N. T. Nguyen, T. Huynh-The, L. B. Le, K. Lee, and W.-J. Hwang, "Intelligent Radio Signal Processing: A Survey," *IEEE Access*, vol. 9, pp. 83818-83850, Jun. 2021.

[29] B. Prabadevi, N. Deepa, **Q.-V. Pham**, D. C. Nguyen, P. K. R. Maddikunta, T. R. Gadekallu, P. N. Pathirana, and O. Dobre, "Toward Blockchain for Edge-of-Things: A New Paradigm, Opportunities, and Future Directions," *IEEE Internet of Things Magazine*, vol. 4, no. 2, pp. 102-108, Jun. 2021.

[30] L. Nkenyereye, J. Y. Hwang, **Q.-V. Pham**, and J. S. Song, "MEIX: Evolving Multi-Access Edge Computing for Industrial Internet-of-Things Services," *IEEE Network*, vol. 35, no. 3, pp. 147-153, May/Jun. 2021.

[31] M. Zeng, E. B. Mohamed, O. A. Dobre, P. Fortier, **Q.-V. Pham**, and W. Hao, "Energy-Efficient Resource Allocation for IRS-Assisted Multi-Antenna Uplink Systems," *IEEE Wireless Communications Letters*, vol. 10, no. 6, pp. 1261-1265, Jun. 2021.

[32] **Q.-V. Pham**, N. Iradukunda, Nguyen H. Tran, W.-J. Hwang, and S.-W. Chung, "Joint Placement, Power Control, and Spectrum Allocation for UAV Wireless Backhaul Networks," *IEEE Networking Letters*, vol. 3, no. 2, pp. 56-60, Jun. 2021.

[33] N.-N. Dao, **Q.-V. Pham**, N. H. Tu, T. T. Thanh, V. N. Q. Bao, D. S. Lakew, and S. Cho, "Survey on Aerial Radio Access Networks: Toward a Comprehensive 6G Access Infrastructure," *IEEE Communications Surveys and Tutorials*, vol. 23, no. 2, pp. 1193-1225, Second Quarter 2021.

[34] **Q.-V. Pham**, M. Zeng, R. Ruby, T. Huynh-The, and W.-J. Hwang, "UAV Communications for Sustainable Federated Learning," *IEEE Transactions on Vehicular Technology*, vol. 70, no. 4, pp. 3944-3948, Apr. 2021.

[35] C. de Alwis, A. Kalla, **Q.-V. Pham**, P. Kumar, K. Dev, W.-J. Hwang, and M. Liyanage, "Survey on 6G Frontiers: Trends, Applications, Requirements, Technologies and Future Research," *IEEE Open Journal of the Communications Society*, vol. 2, pp. 836-886, Apr. 2021.

[36] N.-N. Dao, **Q.-V. Pham**, D.-T. Do, S. Dustdar, "The Sky is the Edge—Toward Mobile Coverage from the Sky," *IEEE Internet Computing*, vol. 25, no. 2, pp. 101-108, Mar.-Apr. 2021.

[37] N. Iradukunda, **Q.-V. Pham**, M. Zeng, H.-C. Kim, and W.-J. Hwang, "UAV-enabled Wireless Backhaul Networks using Non-Orthogonal Multiple Access," *IEEE Access*, vol. 9, pp. 36689-36698, Feb. 2021.

[38] M. Alazab, K. Lakshmanna, T. R. Gadekallu, **Q.-V. Pham**, and P. K. R. Maddikunta, "Multi-Objective Cluster Head Selection using Fitness Averaged Rider Optimization Algorithm for IoT Networks in Smart Cities," *Sustainable Energy Technologies and Assessments*, vol. 43, pp. 100973, Feb. 2021.

[39] S. Bhattacharya, P. K. R. Maddikunta, **Q.-V. Pham**, T. R. Gadekallu, S. R. Krishnan S, C. L. Chowdhary, M. Alazab, and M. J. Piran, "Deep Learning and Medical Image Processing for Coronavirus (COVID-19) Pandemic: A Survey," *Sustainable Cities and Society*, vol. 65, pp. 102589, Feb. 2021.

[40] F. Figueiredo, M. Facina, R. Ferreira, R. Ruby, **Q.-V. Pham**, and G. Fraidenraich, "Large Intelligent Surfaces with Discrete Set of Phase-Shifts Communicating Through Double-Rayleigh Fading Channels," *IEEE Access*, vol. 9, pp. 20768-20787, Jan. 2021.

[41] Luan N. T. Huynh, **Q.-V. Pham**, T.D.T. Nguyen, M.D. Hossain, Y.-R. Shin, and E.-N. Huh, "Joint Computational Offloading and Data-Content Caching in NOMA-MEC Networks," *IEEE Access*, vol. 9, pp. 12943-12954, Jan. 2021.

[42] T.-T. Nguyen, V.-D. Nguyen, **Q.-V. Pham**, and J.-H. Lee, and Y.-H. Kim, "Resource Allocation for AF Relaying Wireless-powered Networks with Nonlinear Energy Harvester," *IEEE Communications Letters*, vol. 25, no. 1, pp. 229-233, Jan. 2021.

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Languages

Vietnamese:	Mother-tongue
English:	Fluent
Korean:	Basic Knowledge